

Region 5, 700 MHz Regional Planning Committee

Recommendations for use of the 700 MHz Interoperability Channels in Southern California

In Region 5¹ the 700 MHz channels are mainly allocated to the Counties or larger cities for voice use. The channels, in a few cases, will be used for narrowband mobile data applications. Given this environment, the Region 5 700 MHz Regional Planning Committee (RPC) convened an interoperability work group (WG) to make recommendations for use of the 700 MHz interoperability channels in the Region 5 area.

The WG considered the FCC rules for interoperability channels, past problems with use of the 800 MHz NPSPAC channels, and current needs for interoperability channels in Region 5 in formulating these recommendations. The primary problem with the 800 MHz implementations is keeping the tactical repeaters knocked down. Because a common CTCSS tone is required, only one repeater can be active at a time in a given area without self interference. Other problems with 800 MHz is the lack of interoperability channels. In Region 5, only the 5 national and the two statewide channels are available (CLEMARS and FIREMARS). The 700 Band gives us far more channels to operate with and because of that the WG is recommending a different approach from 800 MHz in use of the channels.

The WG recommends that each County, in cooperation with cities, be assigned a group of tactical channel channels for use in that County. Each County would also install, on a best effort basis, one calling channel (CH 39-40 – 7CALL50) with coverage throughout the geographical area of each County. These calling stations would be configured as Base FB only. This configuration avoids the multiple repeaters keying at the same time. Each County, in cooperation with cities, would be responsible to monitor the calling channel. Direct mode shall not be used on the Calling channel (7CALL 50).

Conventional tactical channels would be assigned as groups and geographically separated. Each group would consist of a General Public Safety, Law, Fire and EMS channel (total four channels per county). The Counties would make a best effort to provide coverage throughout their geographical areas. The WG recognizes that several of the Counties in Region 5 have large rural areas and it may not be cost effective to provide countywide coverage. Therefore, deployable repeater configurations are acceptable enhancements to fixed station coverage.

¹ Region 5 is defined has the geographical area of Imperial, San Diego, Orange, Riverside, San Bernardino, Los Angeles, Ventura, Kern, Santa Barbara and San Louis Obispo Counties

The following table shows the channels assigned to each County:

General Public Safety Tactical	Law Tactical	Fire Tactical	EMS Tactical	County Assigned	County Assigned	County Assigned
7TAC55	7LAW61	7FIRE63	7MED65	San Diego/Imperial	San Bernardino	Santa Barbara
7TAC56	7LAW62	7FIRE64	7MED66	Riverside	Ventura	
7TAC75	7LAW81	7FIRE83	7MED86	Orange	Kern	
7TAC76	7LAW82	7FIRE84	7MED87	Los Angeles	San Luis Obispo	

Counties should configure fixed stations with patterned antennas and use sites that minimize the signals towards their co-channel Counties. This should include the receive antenna if different from the transmit antenna. As common NAC codes are used, there is some chance of mobile interference inter-county. Patterned antennas and careful site selection will minimize this problem.

Each county may maintain and use a transportable trunked system for interoperability on incidents. The trunked system will only use P25 trunking standards. This system will use a common system ID (to be determined) and 16 common talkgroups (labeled TRP-1 to TRP-16). The system will use the eight FCC designated secondary trunked channels (7TAC51, 7TAC52, 7TAC53, 7TAC54, 7TAC71, 7TAC72, 7TAC73, and 7TAC74) for these systems. The channels 263-264 (7TAC54) and 897-898 (7TAC74) will be used for control channels. Region 5 will work with the State to purchase a common system ID for use by all counties wishing to construct a transportable trunked system. The talkgroups will be assigned at an incident using NIMS procedures. The limit of 16 talkgroups is for two reasons. This number is typical of the modes available in a portable radio, and limiting the talkgroups to 16 with eight channels minimizes the chance of busying out the system with heavy loading.

The eight secondary trunked tactical channels may also be used for direct mode (unit to unit) in all counties. The assignments at an incident would be per NIMS procedures.

The 7GTAC57 and 7GTAC77 channels are reserved for use by critical infrastructure agencies providing support services at an incident. These channels may only be used per a written agreement between a critical infrastructure agency and each County to specify terms of use.